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(54) Title: COMPOSITION FOR MAKING METAL MATRIX COMPOSITES

(57) Abstract: In one embodiment, a composition (10) to be mixed with a molten metal to make a metal matrix composite, the composition characterized by: a ceramic reinforcing filler (12), the ceramic reinforcing filler not being wettable by molten aluminum and/or not being chemically stable in molten aluminum, the ceramic reinforcing filler being coated with a ceramic material, the ceramic material being wettable by and chemically stable in molten aluminum. In a related embodiment, a composition (20) to make a porous preform to be infiltrated by molten metal to make a metal matrix composite, the composition characterized by: a ceramic reinforcing filler (23), the ceramic reinforcing filler not being wettable by molten aluminum, the ceramic reinforcing filler being coated with a ceramic material (22) and optionally with a metal (21) such as nickel, the ceramic material being wettable by molten aluminum. The ceramic material can be coated on the ceramic reinforcing filler by a vacuum deposition technique such as vacuum sputtering.